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Di Santo et al.

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[54] **POWER SUPPLY APPARATUS CAPABLE OF MULTI-MODE OPERATION FOR AN ELECTROPHORETIC DISPLAY PANEL**

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[52] **U.S. Cl.** **340/787**; 350/362; 340/805

[58] **Field of Search** 340/787, 788, 805; 350/362

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[57] **ABSTRACT**

There is disclosed a multi-mode power supply for biasing an electrophoretic display and particularly for biasing the anode electrode of such a display. The supply contains first and second supply means each of which can operate as a constant voltage or constant current supply. The first and second supplies are respectively coupled to the anode electrode of the electrophoretic display so that during the Write Mode the display is operated with a constant current at a first polarity and operates with a constant current at a second polarity during the Erase Mode. Additional modes are shown where AC voltages are applied to the anode electrode either directly as in the case of a Slow Erase Mode or via a capacitor in the case of a Time 60 Cycle Mode for a given time period. In these modes the supplies are operated as constant voltage sources to enable suitable magnitude voltages to be applied to the anode electrode in order to provide optimum operating conditions for the electrophoretic display.

17 Claims, 3 Drawing Sheets